



SEQUENCE LISTING

<110> CREEMERS, Jantina
ANGENENT, Gerrit
KATER, Martin

<120> Process to collect metabolites from modified nectar by
insects

<130> U-13212-4

<140> 09/743885

<141> 2001-01-16

<160> 29

<170> PatentIn Ver. 2.1

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<211> 265

<212> PRT

<213> Petunia x hybrida

<220>

<223> strain: W115

<220>

<223> tissue type: nectar gland

<220>

<223> NEC1 amino acid sequence

<400> 1

Met Ala Gln Leu Arg Ala Asp Asp Leu Ser Phe Ile Phe Gly Leu Leu
1 5 10 15

Gly Asn Ile Val Ser Phe Met Val Phe Leu Ala Pro Val Pro Thr Phe
20 25 30

Tyr Lys Ile Tyr Lys Arg Lys Ser Ser Glu Gly Tyr Gln Ala Ile Pro
35 40 45

Tyr Met Val Ala Leu Phe Ser Ala Gly Leu Leu Leu Tyr Tyr Ala Tyr
50 55 60

Leu Arg Lys Asn Ala Tyr Leu Ile Val Ser Ile Asn Gly Phe Gly Cys
65 70 75 80

Ala Ile Glu Leu Thr Tyr Ile Ser Leu Phe Leu Phe Tyr Ala Pro Arg
85 90 95

Lys Ser Lys Ile Phe Thr Gly Trp Leu Met Leu Leu Glu Leu Gly Ala
100 105 110

Leu Gly Met Val Met Pro Ile Thr Tyr Leu Leu Ala Glu Gly Ser His
115 120 125

Arg Val Met Ile Val Gly Trp Ile Cys Ala Ala Ile Asn Val Ala Val

130	135	140
Phe Ala Ala Pro Leu Ser Ile Met Arg Gln Val Ile Lys Thr Lys Ser		
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Val Glu Phe Met Pro Phe Thr Leu Ser Leu Phe Leu Thr Leu Cys Ala		
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Thr Met Trp Phe Phe Tyr Gly Phe Phe Lys Lys Asp Phe Tyr Ile Ala		
	180	185 190
Phe Pro Asn Ile Leu Gly Phe Leu Phe Gly Ile Val Gln Met Leu Leu		
	195	200 205
Tyr Phe Val Tyr Lys Asp Ser Lys Arg Ile Asp Asp Glu Lys Ser Asp		
	210	215 220
Pro Val Arg Glu Ala Thr Lys Ser Lys Glu Gly Val Glu Ile Ile Ile		
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Asn Ile Glu Asp Asp Asn Ser Asp Asn Ala Leu Gln Ser Met Glu Lys		
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Asp Phe Ser Arg Leu Arg Thr Ser Lys		
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<210> 2
 <211> 221
 <212> PRT
 <213> Petunia x hybrida

<220>
 <223> strain: W115

<220>
 <223> tissue type: nectar gland, secretory cell

<220>
 <223> FBP15 amino acid sequence

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Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala	
20 25 30	
Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe	
35 40 45	
Ser Ser Arg Gly Arg Leu Tyr Glu Tyr Ala Asn Asn Ser Val Lys Ala	
50 55 60	
Thr Ile Asp Arg Tyr Lys Lys Ala Ser Ser Asp Ser Ser Asn Thr Gly	
65 70 75 80	

Ser Thr Ser Glu Ala Asn Thr Gln Phe Tyr Gln Gln Glu Ala Ala Lys
 85 90 95
 Leu Arg Val Gln Ile Gly Asn Leu Gln Asn Ser Asn Arg Asn Met Leu
 100 105 110
 Gly Glu Ser Leu Ser Ser Leu Thr Ala Lys Asp Leu Lys Gly Leu Glu
 115 120 125
 Thr Lys Leu Glu Lys Gly Ile Ser Arg Ile Arg Ser Lys Lys Asn Glu
 130 135 140
 Leu Leu Phe Ala Glu Ile Glu Tyr Met Arg Lys Arg Glu Ile Asp Leu
 145 150 155 160
 His Asn Asn Asn Gln Met Leu Arg Ala Lys Ile Ala Glu Ser Glu Arg
 165 170 175
 Asn Val Asn Met Met Gly Gly Glu Phe Glu Leu Met Gln Ser His Pro
 180 185 190
 Tyr Asp Pro Arg Asp Phe Phe Gln Val Asn Gly Leu Gln His Asn His
 195 200 205
 Gln Tyr Pro Arg Gln Asp Asn Met Ala Leu Gln Leu Val
 210 215 220

<210> 3
 <211> 18
 <212> PRT
 <213> Calluna vulgaris

<220>
 <223> tissue type: flower

<220>
 <223> Calluna vulgaris signal peptide

<400> 3
 Met Phe Leu Pro Ile Leu Phe Thr Ile Ser Leu Leu Phe Ser Ser Ser
 1 5 10 15

His Ala

<210> 4
 <211> 1205
 <212> DNA
 <213> Petunia x hybrida

<220>
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<223> tissue type: nectar gland

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<223> NEC1

<400> 4

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cttcttggtg atattgtatc attcatgggc ttcctagcac ccgtgccaac attttacaaa 180
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<211> 1157

<212> DNA

<213> Petunia x hybrida

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<223> strain: W115

<220>

<223> tissue type: nectar gland

<220>

<223> cDNA library of nectaries from Petunia hybrida
flowers

<220>

<223> FBP15

<400> 5

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tggttaactta cagaactcaa acaggaacat gctaggcgag tctctaagtt ctctgactgc 540
aaaagatctg aaaggcctgg agaccaaact tgagaaagga attagtagaa ttaggtccaa 600
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 <212> DNA
 <213> *Calluna vulgaris*

<220>
 <221> sig_peptide
 <222> (1)..(54)

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<210> 7
 <211> 2141
 <212> DNA
 <213> *Petunia x hybrida*

<220>
 <223> strain: W115

<220>
 <223> NEC1 promoter

<400> 7

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<210> 8
<211> 22
<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: primer prat
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<210> 9
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<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: primer prat
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<400> 9
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<210> 10
<211> 29
<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: primer prat
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<400> 10
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<210> 11
<211> 24

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<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer prat
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<210> 12
<211> 24
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer prat
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<400> 12
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<210> 13
<211> 35
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer prat
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<210> 14
<211> 32
<212> PRT
<213> Calluna vulgaris

<220>

<223> CVH 50 N-terminal sequence

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Ser Val Leu Asp Phe Cys Val Ala Asp Pro Ser Leu Pro Asp Gly Pro
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Ala Gly Tyr Ser Cys Thr Glu Pro Ser Thr Val Thr Ser Gln Asp Phe
20 25 30

<210> 15

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<212> PRT
<213> *Calluna vulgaris*

<220>
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Ala Gly Tyr Ser Cys Lys Glu Pro Ala Lys Val Thr Val Asp Asp Phe
20 25 30
Val Phe His Gly Leu Gly Thr Ala
35 40

<210> 16
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<212> DNA
<213> Artificial Sequence

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<210> 17
<211> 20
<212> DNA
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<220>
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<210> 18
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<212> DNA
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<210> 19
<211> 22
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<223> Description of Artificial Sequence: primer prat
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22

<210> 20
<211> 28
<212> DNA
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<220>

<223> Description of Artificial Sequence: primer prat
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28

<210> 21
<211> 27
<212> DNA
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<220>

<223> Description of Artificial Sequence: primer prat
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<210> 22
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<212> DNA
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<220>

<223> Description of Artificial Sequence: primer prat
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tcttgatttc 70

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<211> 73
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer prat
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attggaagga aca 73

<210> 24

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer prat
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<211> 33

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer prat
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<210> 26

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer prat
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<210> 27

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer prat
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<210> 28

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

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<210> 29

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

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33